UTAH STATE IMPLEMENTATION PLAN

SECTION X

VEHICLE INSPECTION AND MAINTENANCE PROGRAM

PART C

SALT LAKE COUNTY

Adopted by the Utah Air Quality Board
February 5, 1997

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UTAH STATE IMPLEMENTATION PLAN
SECTION X
AUTOMOTIVE INSPECTION AND MAINTENANCE (I/M) PROGRAM
PART C
SALT LAKE COUNTY

1. I/M performance standard

Federal requirements EPA's I/M regulation, 40 CFR Part 51, Inspection and Maintenance Program Requirements, Final Rule November 5, 1992, specifies a model Basic I/M program. Utah is required by Section 182 of the Clean Air Act to implement an I/M program in Salt Lake County that is at least as effective as the EPA's Basic Performance Standard. The Basic I/M performance standard is specified in 40 CFR 51.352. Regulators are not required to implement the exact elements specified in EPA's model I/M programs. EPA's I/M regulations instead require a performance demonstration that local I/M programs result in automotive emissions equal to or less than predicted for the EPA model I/M program. State and local governments may choose options best suited for their area to meet the performance standard.

Basic I/M Performance Standard Salt Lake County's Basic I/M program exceeds the Basic I/M performance standard for all pollutants. Salt Lake County is in a moderate ozone non-attainment area and is not classified for carbon monoxide. Achieving EPA's Basic I/M performance standard in Salt Lake County will result in no increase in NO_X as a result of the Basic I/M program.

Basic I/M Program MOBILE modeling The performance standard demonstration made use of EPA's MOBILE5.a model. The MOBILE5.a model is able to calculate emission factors, grams of a particular pollutant per vehicle mile traveled across the fleet in an area (G/VMT), given information about the fleet, climate, fuel characteristics, and I/M programs in a local area. MOBILE5.a was used for the Basic I/M performance standard demonstration analysis. The MOBILE5.a input and output files for the modeling performed to evaluate the emission reduction benefits for Salt Lake County's Basic I/M program are found in the Appendices for Section X, Part C. Table X.C.1 summarizes the attainment milestones, the applicable performance standard and program target emission factors for VOC, CO and NO_X for the Basic I/M program. The modeling demonstrates compliance with both the federal Basic I/M performance standard as required by the ozone maintenance plan until the UTAH98 Enhanced I/M program is implemented.

SALT LAKE COUNTY BASIC I/M PERFORMANCE STANDARD ANALYSIS SUMMARY
(Basic I/M Program effective until replaced by UTAH98 Enhanced I/M program no later than January 1, 1998)

pollutant	program modeled	emission factors in grams/mile			
		January 1	1997	2000	2003
VOC	Basic Performance Standard		2.70	2.47	2.30
	Basic Program Target		2.66	2.40	2.22
NO_x	No I/M or ATP Program		2.60	2.38	2.23
	Basic Program Target		2.53	2.32	2.17
		January 1	1996	2000	
CO	Basic Performance Standard		22.85	18.69	
	Basic Program Target		21.14	17.83	

TABLE X.C.1

Salt Lake County UTAH98 Enhanced I/M program requirements The Utah Air Quality Board adopted an ozone maintenance plan for Salt Lake and Davis Counties on November 5, 1993. The plan was reorganized and adopted on January 5, 1995. Revisions to the ozone maintenance plan were adopted by the Board on June 5, 1996, and January 7, 1997. The ozone maintenance plan requires implementation of an enhanced I/M program no later than January 1, 1998. The ozone maintenance plan established a performance standard for both counties that is more stringent than the federal Basic I/M performance standard. Parts A and C of section X, together with referenced appendices, demonstrates compliance with the enhanced IM program for Salt Lake County as specified in Part IX.D.2.g of the Ozone SIP and herein after referenced as Salt Lake County's UTAH98 Enhanced Program.

UTAH98 Enhanced I/M Program MOBILE modeling The performance standard demonstration is made by use of the most recent release of EPA's MOBILE model. The MOBILE5.a.h model is able to calculate emission factors, grams of a particular pollutant per vehicle mile traveled across the fleet in an area (G/VMT), given information about the fleet, climate, fuel characteristics, and I/M programs in a local area. MOBILE5.a.h was used for the UTAH98 Enhanced I/M program performance standard demonstration analysis. The performance demonstration summary and Mobile 5.a.h input and output files for the performance demonstration analysis for the UTAH98 Enhanced I/M program are found in Section X, Part C, Appendices. Table X.C.2 summarizes the modeled VOC, CO and NO_X emission factors specified in Section IX, Part D.2 of the Ozone Maintenance Plan for the UTAH98 Enhanced I/M program. The modeling demonstrates compliance with both the federal Basic I/M performance standard and the ozone maintenance plan Basic I/M performance standard

SALT LAKE COUNTY UTAH98 ENHANCED I/M PERFORMANCE STANDARD ANALYSIS SUMMARY
(UTAH98 Enhanced I/M Program to replace the Basic I/M program no later than January 1, 1998)

pollutant	program modeled	emission factors in grams/mile				
		July 1	1998	2000	2003	2006
VOC	Basic Performance Standard			2.47	2.30	
	UTAH98 Performance Standard		2.09	1.85	1.63	1.47
	UTAH98 Program Target		2.09	1.85	1.63	1.47
NO_x	No I/M, No ATP			2.38	2.23	
	UTAH98 Performance Standard		2.20	1.96	1.81	1.76
	UTAH98 Program Target		2.20	1.96	1.81	1.76
CO	Basic Performance Standard			18.69		
	UTAH98 Performance Standard		15.46	12.65	10.56	9.29
	UTAH98 Program Target		15.46	12.65	10.56	9.29

TABLE X.C.2

The PM_{10} contingency plan adopted on July 1, 1994, requires implementation of an enhanced I/M program in Davis and Salt Lake Counties if Salt Lake County violates the PM_{10} standard. Commitments from the Salt Lake County Commissioners to implement an enhanced I/M program, as required by the SIP, are in Section IX, Part A, Appendix 1. The enhanced I/M program can be revised in the future by the Salt Lake County Commissioners as long as the revised program meets all the applicable performance standards documented in the Ozone SIP, Section IX.

2. Network type

Salt Lake County's Basic I/M program is currently a basic, decentralized, test-and-repair system consisting of approximately 400 stations. Beginning January 1, 1998, the UTAH98 Enhanced I/M network will use ASM2 (BAR97) inspections in a decentralized test and repair network. Letters of opinion from the Utah Attorney General's Office and the Salt Lake County Attorney's offices verifying the authority to implement the specified network in Salt Lake County are provided in Section X, Part C, Appendices, along with Salt Lake County health regulations.

3. Tools and resources

Funding mechanisms Salt Lake County's I/M program is funded through two mechanisms. At the time of registration, a fee of $1 per car is collected by the Salt Lake County Tax Assessor's Office or Utah Tax Commission Motor Vehicle Customer Service Division. Those monies are remitted to the county in which the vehicle is registered. Under its Basic I/M program, Salt Lake County sells the emissions certificates for $2 each. This fee is projected to increase to $3 after implementation of the UTAH98 Enhanced I/M program. The fees are dedicated to I/M needs. Furthermore, the County

charges fees for various permitting activities. A fee schedule can be found in Appendix C of the Salt Lake City-County Regulation #22 for the Basic I/M program and Salt Lake City-County Regulation #22A for the UTAH98 Enhanced I/M program. The county put the fee schedule into appendices so that it can be revised quickly, as needed, to support the program without taking the entire document through rulemaking. Salt Lake County began its I/M program in 1984. Past performance has demonstrated that adequate funding of the county's I/M program can be maintained in this manner.

Funding requirements Salt Lake County will continue to allocate funding as needed to comply with the relevant requirements specified in Utah's SIP; Utah statutes; county regulations and policies; and the federal I/M program regulation. Program budgets will include funding for resources necessary to adequately: manage the program; conduct covert and overt audits, including repairs as specified in Section X.C.13; assist and educate inspectors, repair technicians, station owners, and the public; manage, analyze, and report data; ensure compliance with the program by inspectors, stations, and vehicle owners; and evaluate and upgrade the programs. Budgets and descriptions of personnel resources, facilities, and equipment for Salt Lake County's I/M program are provided in Section X, Part C, Appendices.

4. Test convenience

There are approximately 400 permitted Basic I/M stations currently available within Salt Lake County. Salt Lake County estimates that this number may decrease by 10-15% when the UTAH98 Enhanced I/M program is initially implemented. Specific operating hours are not specified by the county. However, an I/M technician must be available for at least 40 hours per week at facilities open to the public. Some stations that test and service only one type of vehicle are permitted. It may not be practical to have a sports car tested at a heavy duty truck repair facility. Also there are government and private fleet permitted stations that are not open to the public.

5. Vehicle Coverage

Subject fleet The Salt Lake County health regulations specify that all model year 1968 and newer model year light duty vehicles, light duty trucks, and heavy duty trucks registered or principally-operated in Salt Lake County are subject to the I/M program except for exempt vehicles. Vehicle coverage is discussed in greater detail in the Salt Lake County health regulations provided in Section X, Part C, Appendices. Statistics for the subject vehicle fleet by vehicle type, model year, vehicle class, and weight class are included in Appendices for Section X, Part C. The data was compiled for the 1990 emissions inventory and has been subjected to a comprehensive quality assurance effort.

Alternative fuels Vehicles operated on alternative fuels such as propane, alcohol, and natural gas are also subject to the program. Dual-fueled vehicles are tested twice, once on each fuel.

Government fleet Section 41-6-163.6(1)(b) requires that all vehicles owned or operated in the I/M counties by federal, state, or local government entities comply with the I/M programs. Salt Lake County permits government stations and certifies inspectors to perform I/M inspections. The I/M station permit and inspector certification requirements are the same for government fleets as for private or commercial stations and inspectors. Some government agencies choose to have their vehicles inspected at a commercial I/M station. Salt Lake County requires submittal of a list of subject vehicles and a certificate of compliance or waiver for each vehicle every year. See Section X, Part C, Appendices, for the waiver policies developed by Salt Lake County.

Vehicles owned by students and federal employees Section 41-6-163.3(5) requires universities and colleges located in Utah's I/M areas to require proof of compliance with the I/M program for vehicles which are permitted to park on campus regardless of where the vehicle is registered. Vehicles operated by federal employees and operated on a federal installation located within an I/M program area are also subject to the I/M program regardless of where they are registered. Proof of compliance consists of a current vehicle registration in an I/M program area or an I/M certificate of compliance or waiver, or evidence of exempt vehicle status as specified in this section.

Farm truck exemption Eligibility for the farm truck exemption from the I/M programs is specified in Section 41-6-163.6(4) and must be verified in writing by Salt Lake County I/M program staff. The owner must sign an affidavit on Utah State Tax Commission form TC-838 that vehicle use will be limited to agricultural activities. A copy of the form is provided in Appendices for Section X, Part A. Due to past abuses by vehicle owners, Salt Lake County strictly limits use of the farm truck exemption.

Diesel vehicle exemption Diesel vehicles are no longer exempt from I/M. Salt Lake County implemented its diesel I/M program on January 1, 1997 in accordance with Salt Lake County Health Regulation #28.

New vehicle exemption Proof that a vehicle is new and being registered for the first time is established by presentation of a Manufacturer's Statement of Origin (MSO) at the time of registration.

Out-of-state exemption Vehicles registered in Salt Lake County, but operated out-of-state are eligible for an extension. The owner must complete Utah State Tax Commission form TC-810 in order to be registered without inspection documentation. The owner must explain why the vehicle is unavailable for inspection in Utah. Common situations include Utah citizens that are military personnel stationed outside of the state, students attending institutions of higher education elsewhere, and people serving missions. If the temporary address of the owner is located within another I/M program area listed on the back of the form, the owner must submit proof of compliance with that I/M program at the time of, and as a condition precedent to, registration or renewal of registration. The vehicle owner must identify their anticipated date of return to the state

and is required to have the vehicle inspected within 10 days after the vehicle is back in Utah. Salt Lake County maintains a record of such exemptions and requires submission of an I/M inspection certificate or waiver at the indicated time. A copy of the Tax Commission form is found in Section X, Part A, Appendices and samples of the letter Salt Lake County sends to vehicle owners who have not complied after the return date is provided in Appendices of Section X, Part C.

Exempt vehicle statistics Motorcycles, farm vehicles and new vehicles being registered for the first time are exempt. Statistics for exempt vehicles are provided in Table X.C.3.

VEHICLES EXEMPT FROM I/M PROGRAM REQUIREMENTS IN SALT LAKE COUNTY
(provided by Utah Motor Vehicle Customer Service Division January 1995)

motorcycles	8,212
farm trucks (over 12,000 GVW)	148
farm trucks (≤ 12,000 GVW)	143
new vehicles	8,813
total	17,316

TABLE X.C.3

Unregistered vehicles Law enforcement agencies conducted random roadblock surveys in 1992. The number of unregistered vehicles or vehicles with expired registrations in Salt Lake County is unknown. A data summary of the 1992 survey is provided below.

1992 REGISTERED AND UNREGISTERED VEHICLE DATA
(Utah Highway Patrol and Motor Vehicle Customer Service Division data)

County	Vehicles Registered	Registration Citations	Registration Warnings
Salt Lake	528,452	4,404	791

Roadside I/M program element The Salt Lake County I/M health regulations require that vehicles available for rent or use in Salt Lake County are subject to its I/M program. To the extent practicable, all vehicles principally-operated in the county are subject to the I/M program.

6. Test procedures and standards

Specifications Detailed specifications for the I/M test procedures and standards are described in the Salt Lake County health regulations provided in Section X, Part C, Appendices. The ASM2 and UTAH91 Analyzer specifications are provided in Section

X, Part C, Appendices 7 and Section X, Part A, Appendices. Specifications for the test procedure and equipment were developed according to good engineering practices to ensure test accuracy.

Basic I/M Program test procedure and analyzer Salt Lake County's Basic I/M program uses EPA's PRECONDITIONED TWO SPEED IDLE TEST as specified in EPA-AA-TSS-I/M-90-3 March 1990, Technical Report, "Recommended I/M Short Test Procedures for the 1990's: Six Alternatives." All Basic emissions inspections are performed using the UTAH91 Analyzer, a BAR90-type emissions analyzer. The UTAH91 Analyzer calibration specifications and emissions test procedures meet the minimum standards established in Appendix A of the EPA's I/M Guidance Program Requirements, 40 CFR Part 51 Subpart S. Covered vehicles are defined in X.C.5. All covered vehicles in Salt Lake County are subject to the Basic I/M test procedure and inspected using the UTAH91 analyzer as specified in Section X, Part A, Appendices until the UTAH98 Enhanced I/M program begins no later than January 1, 1998.

UTAH98 *Enhanced I/M Program test procedure and analyzer* Salt Lake County's Enhanced I/M program uses the ASM2 test procedure in accordance with EPA-AA-RSPD-IM-96-2, Acceleration Simulation Mode Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications, Technical Guidance and will be performed with BAR97-compliant equipment. The inspection will consist of a loaded-mode Emissions test for concentrations of hydrocarbons (HC), carbon monoxide (CO), and oxides of nitrogen (NO_X), a functional inspection of the gas cap and a visual/tampering inspection of the fuel filter neck restrictor, PCV, EGR, AIR and catalytic converter systems. OBDII testing will be performed on 1998 and later model year vehicles. All UTAH98 Enhanced I/M emissions inspections are performed using the BAR97-compliant UTAH98 Analyzer. The UTAH98 Analyzer calibration specifications and emissions test procedures meet the minimum standards established in above referenced ASM2 Specification. The testing will use a BAR97-compliant dynamometer. Covered vehicles are defined in X.C.6. Gas cap and EGR valve function tests will be included in the UTAH98 program. All covered vehicles in Salt Lake County are subject to the UTAH98 Enhanced I/M test procedure beginning January 1, 1998.

Covered vehicles are defined in Section X.C.5. Until January 1, 1998, all covered vehicles in Salt Lake County are subject to the Basic test procedure and inspected using the UTAH91 analyzer as specified in this section. On January 1, 1998, all covered vehicles will be inspected under Salt Lake County’s UTAH98 program as specified in this section.

Pre-inspection emissions-related repairs Inspectors in the county’s test-and-repair networks are required to perform the emissions test prior to making any emissions-related repairs when a vehicle is presented for an emissions inspection. All inspectors who conduct test-only inspections, are required to ask the vehicle owner or operator whether a tune-up or other emissions-related repairs have been performed within 6 weeks

prior to the emissions inspection and to document the owner's response in the UTAH91 or UTAH98 Enhanced I/M computer database.

Safety issues Vehicles presented in unsafe condition must be repaired before inspection. Vehicles are also subject to an annual safety inspection administered by the Highway Patrol. Submission of proof of compliance with the safety program is also required as a condition for registration or renewal of registration. Most owners in Salt Lake County's test-and-repair network have the safety and emissions inspection performed at the same time. Data relative to the safety inspection can be recorded in the UTAH91 or UTAH98 Enhanced I/M Analyzers. The Salt Lake County I/M program is administered with close cooperation with the Utah Highway Patrol Safety Program. UTAH98 Enhanced I/M program equipment, including dynamometers, shall be operated in accordance with manufacturer's specifications to prevent injury or damage to people or equipment. Exhaust gases are to be safely ventilated in accordance with EPA-AA-RSPD-IM-96-2.

Exhaust leaks The UTAH91 analyzer measures exhaust carbon monoxide (CO) and carbon dioxide (CO_2). Exhaust CO + CO_2 readings of less than 6% indicate a leaky exhaust system and will cause either analyzer to abort the inspection. See section 3.3.30C of the UTAH91 analyzer specifications in Appendices for Section X, Part A. The UTAH98 Enhanced I/M program will reject vehicles with leaking exhaust systems in compliance with EPA-AA-RSPD-IM-96-2.

Basic I/M program emission standards The Salt Lake County Health Regulation #22, Appendix D, includes hydrocarbon and carbon monoxide emission standards. These emission standards allow for quick adjustment of the standards in case actual failure rates fall below the level specified in the State Implementation Plan. Prior to January 1, 1998, vehicles undergoing Basic I/M testing must pass both the hydrocarbon and carbon monoxide emission standard, as applicable. The emission standards for the Basic I/M program were used in the MOBILE5.a modeling to demonstrate compliance with the federal Basic I/M performance standard.

Enhanced (UTAH98) I/M program emission standards The Salt Lake County Health Regulation #22A, Appendix D, includes hydrocarbon, oxides of nitrogen and carbon monoxide emission standards. These emission standards allow for quick adjustment of the standards in case actual failure rates fall below the level specified in the State Implementation Plan. Effective January 1, 1998, vehicles must pass the hydrocarbon, nitric oxide and carbon monoxide emission standard, as applicable. The emission standards for the UTAH98 Enhanced I/M program were used in the MOBILE5.a.h modeling to demonstrate compliance with the federal Basic I/M performance standard.

Stringency Salt Lake County will adjust tailpipe emission standards as necessary to maintain a stringency rate of at least 22% for pre-81 model year vehicles, the stringency rate used in the Basic I/M and UTAH98 Enhanced I/M performance standard modeling demonstrations.

Re-test standards The same test procedure and emission standards are used for initial tests and retests, regardless of which part a vehicle may have failed during an initial test. The UTAH91 and UTAH98 Enhanced I/M test procedure requires an official test, once initiated, to be performed in its entirety regardless of intermediate outcomes, except in the case of invalid test conditions, unsafe conditions, or the fast pass/fail algorithms.

*Anti-tampering provision*s Salt Lake County requires a visual emissions control device inspection to determine whether the air system, catalyst, fuel inlet, exhaust gas recirculation (EGR) valve, evaporative system, positive pressure crankcase valve (PCV), and gas cap are present, appear to be properly connected, and appear to be the correct type for the certified vehicle configuration. Regardless of the vehicle model year, Salt Lake County does not allow waivers for tampered vehicles or money spent to repair tampered or missing emission control devices to be applied towards a minimum waiver cost. Salt Lake County requires repair of catalyst, air pump system, and fuel inlet restrictor for model year 1984 and newer vehicles. The county requires repair of any tampering of the air system, catalyst, fuel inlet, exhaust gas recirculation (EGR) valve, evaporative system, positive pressure crankcase valve (PCV), and gas cap on model year 1990 and newer vehicles. The catalytic convertor must be replaced on vehicles that fail due to a tampered fuel inlet restrictor.

Engine changes The Salt Lake County health regulations have a section that addresses engine changes. After an engine change, vehicles are tested to the tailpipe emission standards and anti-tampering requirements applicable to vehicles of the chassis model year. Mixing vehicle classes (e.g., light-duty with heavy-duty) and certification types (e.g. California with federal) within a single vehicle is considered tampering.

Fuel switching Vehicles that are switched to a fuel type for which there is no certified configuration are tested according to the most stringent emission standards for that vehicle model year and vehicle type.

7. Test Equipment

UTAH91 Specifications Written technical specifications for the UTAH91 Basic I/M Analyzer, a BAR90-type computer emissions analyzer, are provided in Section X, Part A, Appendices.

UTAH98 Specifications Written technical specifications for the UTAH98 Enhanced I/M Analyzer, a BAR97-type computer emissions analyzer, will be provided in Section X, Part C, Appendices. It will be validated in time to meet the January 1, 1998 Enhanced I/M program implementation date.

Analyzer access restrictions An inspector access code is required to use the analyzer for official tests, a service access code to repair or service the analyzer, and an auditor access code to access the audit functions. DOS functions are not accessible to station owners,

inspectors, or analyzer service personnel. Programming changes are made by Salt Lake County I/M auditors from disks supplied by the analyzer manufacturer.

Data security provisions Manual data entry is minimized. For initial inspections, the inspector enters vehicle registration and vehicle information from the keyboard. For retests, the inspector calls up the initial test file, compares the vehicle and owner data, and confirms the VIN/license plate data. Data regarding inspections, analyzer calibration and service, lock-out activities, and audit information are stored to a secured disk drive and retrieved by county auditors on a regular basis, but at least once per quarter.

UTAH91 Automated test procedure The UTAH91 analyzer automatically reads all test measurements, records test results in the computer database, determines whether the vehicle has passed or failed a test, and prints vehicle inspection reports and inspection certificates for all subject vehicles. The analyzers are capable of simultaneously sampling dual exhaust vehicles. The UTAH91 analyzer bench includes two non-dispersive infrared (NDIR) analyzers for carbon monoxide, carbon dioxide, and hydrocarbon measurements (one low range and one high range), and one NDIR analyzer for carbon dioxide measurement. The test procedure is automated to the highest degree practical to minimize the potential for intentional fraud and/or human error.

UTAH98 Automated test procedure The UTAH98 analyzer automatically reads all test measurements, records test results in the computer database, determines whether the vehicle has passed or failed a test, and prints vehicle inspection reports and inspection certificates for all subject vehicles. The analyzers are capable of simultaneously sampling dual exhaust vehicles. The UTAH98 analyze will measure carbon monoxide, carbon dioxide, nitric oxide and hydrocarbon emissions. The test procedure is automated to the highest degree practical to minimize the potential for intentional fraud and/or human error in compliance with ASM2.

Security lockouts The analyzers are programmed to trigger lock-outs when abuse or tampering occur. Lock-outs occur after any security system is tampered, failure to conduct or pass periodic calibration tests, or the data recording medium is full. The analyzer can not be used until the lock-out has been cleared by a Salt Lake County I/M auditor. The analyzer automatically keeps an electronic record of all lock-outs including the date of the lock-out, the reason for the lock-out, and the date and person that cleared the lock-out.

UTAH91 Basic I/M certified analyzer use restriction Since September 1, 1991 and ending on December 31, 1997 Salt Lake County requires official emissions tests be conducted only on registered UTAH91 analyzers. A description of the certification procedure is provided in Appendices of Section X, Part A. There have been several updates of the UTAH91 Analyzer specifications to date and more will follow, as necessary, to accommodate new technology vehicles and changes to the program.

UTAH98 Enhanced I/M certified analyzer use restriction Beginning on January 1, 1998, Salt Lake County requires official emissions tests to be conducted only on registered UTAH98 Enhanced I/M analyzers. The UTAH98 Enhanced I/M analyzer will be certified in compliance with BAR97. Updates to the UTAH98 Enhanced I/M Analyzer specifications may occur, as necessary, to accommodate new technology vehicles and changes to the program.

UTAH98 Enhanced I/M certified analyzer design and certification The UTAH98 analyzer will be BAR97 designed and certified . The UTAH98 analyzer will perform ASM2 testing in compliance with the Acceleration Simulation Mode Test Procedures, Emission Standards, Quality Control Requirements, and Equipment Specifications Technical Guidance, EPA-AA-RSPD-IM-96-2, July 1996 and 40 CFR 51.358.

8. Quality Control

General quality control specifications The UTAH91 analyzer specifications were carefully designed to insure that emission measurement equipment is calibrated and maintained properly, and that inspection, calibration records, and maintenance records are accurately created, recorded, and maintained. The UTAH91 specifications meet the test equipment quality assurance practices described in 40 CFR 51 Subpart S Section 51.359 and Appendix A. Salt Lake County will design the UTAH98 analyzer using sound engineering practices to insure that emission measurement equipment is calibrated and maintained properly, and that inspection, calibration records, and maintenance records are accurately created, recorded, and maintained in compliance with 40 CFR 51 Subpart S Section 51.359 and Appendix A.

Automatic electronic quality assurance features Operational analyzer quality assurance measures such as analyzer calibration, zero and span check, hydrocarbon hang-up check, and leak check are mandatory automatic analyzer capabilities. Gas accuracy tolerances, dilution limits, analyzer warm up requirements, system response time requirements, optical correction factors, and interference effects are also addressed in the analyzer specifications. If the checks are not performed on schedule or identify measurements outside of acceptable limits established in the specifications, a lock-out occurs preventing use of the analyzer until such problems are corrected. See Sections 2.12, 2.13. And 2.18 of the UTAH91 Analyzer specifications. Records of all quality assurance activities with respect to the analyzer are automatically recorded in the analyzer's electronic database and evaluated by Salt Lake County I/M auditors on a regular basis. The analyzer specifications discuss requirements for assurance that unauthorized access to the I/M database in the analyzer is prevented. Attempts to deliberately avoid or defeat analyzer or inspection quality assurance provisions result in disciplinary action against the I/M mechanic and/or station. The automatic electronic quality assurance features of the UTAH98 Enhanced I/M analyzer will be in compliance with the referenced ASM2 specification, EPA-AA-RSPD-IM-96-2.

Analyzer maintenance Section 1.8 of the UTAH91 Analyzer specifications describes required services, warranty provisions, and documentation that analyzer manufacturers must provide to customers. It includes ensuring that the analyzer meets the quality assurance specifications at the time of delivery, that routine quarterly preventative maintenance is performed, training on how to use, maintain, and operate the analyzer is provided by the manufacturer, and that if repair of defects can not be made promptly a temporary analyzer replacement is provided. Service activities are recorded in the analyzer's electronic database. Salt Lake County has conducted a survey of analyzer owners to determine compliance with these provisions. Failure of an analyzer manufacturer to meet quality assurance specifications could result in de-certification of that manufacturer's product for use in Salt Lake County. Maintenance of the UTAH98 Enhanced I/M Analyzer will be in compliance with the Salt Lake County Health Regulation #22A.

Document security Document security was a high priority during the UTAH91 analyzer design phase. The analyzer tracks the unique certificate numbers and ensures that the certificate printed matches the test number. Missing certificate numbers are stored in the analyzer database for auditor review. The certificates are printed on a dedicated and locked printer. Only certified inspectors have access to the certificate printer and storage area. Access to the certificates is only possible for the purpose of loading or aligning certificates in the printer. Attempts to access this area at other times or without an access code sets a lock-out that only Salt Lake County auditors can clear. The certificate storage area is designed with redundant security systems including both hardware and software locks. See Section 2.16 of the UTAH91 analyzer specifications. The blank certificates are commercially printed with sequential and unique serial numbers on counterfeit-resistant security paper. Document security for the UTAH98 Enhanced I/M Analyzer will be in compliance with the Salt Lake County Health Regulation #22A.

Analyzer certification Sound engineering practices were followed during the design and certification of the UTAH91 analyzer to insure accurate and repeatable inspections under a range of environmental conditions. Manufacturer owner's manuals, operating instructions, and warranty provisions were also reviewed during the certification process. Comprehensive records of the certification process have been maintained. UTAH98 Enhanced I/M Analyzer certification will be in compliance with the Salt Lake County Health Regulation #22A.

General analyzer security provisions The Salt Lake County Health Regulation #22 requires use of a certified and registered UTAH91 analyzer for official inspections prior to January 1, 1998. Beginning January 1, 1998, Salt Lake County Health Regulation #22A requires use of a certified and registered UTAH98 Enhanced I/M analyzer for official inspections. Inspection records include the analyzer registration number. The regulations make it illegal to alter analyzer software or hardware without written approval. Analyzer calibration requirements, maintenance, and warranty provisions are also specified in the above Salt Lake County health regulations.

9. Waivers

Waiver rate Salt Lake County will take corrective action as needed to maintain a maximum waiver rate of 1% of the initially failed vehicles or the Utah Air Quality Board will revise the SIP and emission reductions claimed based on the actual waiver rate. The conditions for issuing waivers legally authorized and specified in the Salt Lake County health regulations meet the minimum waiver issuance criteria specified in 40 CFR Subpart S 51.360.

Waiver procedures The Vehicle Inspection Report (VIR) printed by the I/M analyzer after each inspection and provided to the vehicle owner/operator includes warranty and waiver information, if the vehicle failed the emissions inspection. A waiver document may be issued only by Salt Lake County I/M technical center staff and only after verification of required documentation. Any tampered, missing, or inoperable emission control devices must have been replaced or repaired. At least $100 for 1968 through 1980 model year vehicles and $200 for 1981 and newer model year vehicles must have been spent on acceptable emission repairs as verified by a Salt Lake County I/M program auditor by physical examination of the vehicle and review of the repair documentation. Repair documentation, such as receipts, are copied and retained by auditor to prevent reuse. Salt Lake County requires signed documentation on official stationary of a business involved in the automotive repair industry to include labor costs. In Salt Lake County, the retest must reflect a reduction of carbon monoxide and/or hydrocarbon emissions after repairs. After January 1, 1998, the retest must reflect a reduction in oxides of nitrogen (NO_X) emissions if the vehicle originally failed the emissions inspection as a result of NO_X emissions in excess of the standards. Emissions defects indicated by On Board Diagnostics II (OBD II) fault codes must be repaired for the vehicle to qualify for a waiver. Vehicles still under the federal emissions warranty are not eligible for a waiver until all warranties are exhausted. Warranted repair and tampering repair may not be applied to the repair cost waiver limits. Waivers are only valid for one test cycle. The vehicle owner surrenders the original waiver document at the time of registration; copies are not accepted for registration purposes. Specific provisions regarding waivers may be found in the Salt Lake County health regulations and the Utah Tax Commission Division of Motor Vehicle policy manual which is available upon request. The I/M program in Salt Lake County does not provide for time extensions to relieve economic hardships in obtaining emission-related repairs.

10. Motorist compliance enforcement

Registration denial Salt Lake County's I/M program is enforced by means of registration denial. Vehicle owners must present proof of compliance with the I/M program, a waiver, or evidence of exemption from the I/M program as a condition precedent to vehicle registration or registration renewal. See Section X.C.4 and X.C.5 for a more detailed discussion of inspection frequency, inspection scheduling, license plate requirements, and enforcement of the registration requirements. Citations are routinely

issued to operators of vehicles with expired or missing license plates during routine traffic stops, parking lot inspections, and roadblocks. As specified in Section 41-1a-1303 (Section X, Part A, Appendices), driving without registration is a Class C misdemeanor. The penalty for a Class C misdemeanor is imprisonment of no more than 90 days and $750 for persons or up to $1000 for corporations, associations, partnerships, or government instrumentalities. In addition to paying a fine, the motorist must register the vehicle. It is currently a Class B misdemeanor to violate a County health regulation. The penalty for a Class B misdemeanor is an imprisonment not exceeding six months and for persons a fine of up to $1000 or for corporations, associations, partnerships, or government instrumentalities a fine of up to $5000. Copies of the relevant statute are provided in Section X, Part A, Appendices. In Utah, the magnitude of such penalties is a judicial rather than an administrative decision. Per Section 41-1a-1315 falsification of evidences of title and registration is a second degree felony.

Certificate of Compliance The Certificate of Compliance is dated by the I/M analyzer immediately after a passing inspection is completed. The certificate is only valid for registration purposes for two months. At the same time the analyzer also prints the following information on the certificate to ensure unambiguous vehicle identification: the vehicle identification number (VIN), license number, model year, make, and model. A sample of the Certificate of Compliance is in Appendix C of the UTAH91 specifications. The certificates are only printed in the event that the vehicle passed the emissions inspection. Separate documentation, including the same vehicle information, is used for waivers.

Fuel changes to non-subject status Vehicle changes that would result in registration changes from a subject to exempt status require physical confirmation by Salt Lake County I/M program personnel at the I/M technical center. Falsification of registration or title information is a felony offense.

Title transfers Proof of compliance with the I/M program is required for a title transfer. The system ensures that owners are not able to avoid the program by extending the inspection date through manipulation of the title and registration system.

Salt Lake County I/M program staff, peace officers, and Utah Tax Commission Motor Vehicle Customer Service Division routinely work together to ensure that motor vehicle owners that move into an I/M program area complete registration transfer including compliance with the I/M program. Except for higher education students and active duty military personnel, people are required to register their vehicles in the county in which they are domiciled. As discussed in the Vehicle Coverage section, although these two exempted classes of vehicle owners do not have to register their vehicles in Utah, they do have to comply with the I/M programs. Employment status, maintenance of a residence, enrollment of children in local schools, and voting districts are considered when identifying persons in violation of this requirement.

Salt Lake County I/M program staff work with citizens, the Utah Motor Vehicle Customer Service Division and county attorneys to identify and prosecute people that illegally transfer registration to a non-subject area to avoid the I/M program. The process is very labor intensive. There are many legitimate reasons to be operating a vehicle in an I/M program area that is registered elsewhere. Violators must be dealt with on a case-by-case basis. Persons caught to date have been subject to fines of around $700. Those prosecuted and convicted could end up with a criminal record and actual jail time. Fraudulent registration of a motor vehicle is a felony offense. Most people confronted with evidence of their guilt and the seriousness of their offense, to date, have complied promptly. The involved agencies are developing more efficient methods of dealing with illegal registrations that result in exemption from the I/M program.

Salt Lake County is committed to a cooperative aggressive effort to ensure that vehicles operated in the county comply with the I/M program to ensure a compliance rate of at least 96%.

11. Motorist compliance enforcement program oversight

Utah Tax Commission, tax assessors, and county roles The Utah Tax Commission Motor Vehicle Customer Service Division and Salt Lake County tax assessor deny application for vehicle registration or renewal of registration without submittal of a valid certificate of compliance, waiver, or verified evidence of exemption. Proof is retained by the tax clerk, micro-photo-copied, and then destroyed. Altered or hand-written documents are not accepted. All certificate data is collected by Salt Lake County I/M program auditors and subjected to scrutiny for evidence of any improprieties.

Database quality assurance The vehicle registration database is maintained and quality assured by the Motor Vehicle Customer Service Division. The I/M inspection database is maintained and quality assured by the Salt Lake County I/M program staff. The Salt Lake County I/M program has access to the Motor Vehicle Customer Service Division database and utilize it on a regular basis for quality assurance purposes. The database is subject to regular auditing, cross-referencing, and analysis. The database is also evaluated using data obtained during roadblocks and parking lot surveys. Evidence of program effectiveness problems trigger additional joint enforcement activities.

Oversight provisions The oversight program includes verification of exempt vehicle status through inspection, data accuracy through automatic and redundant data entry for most data elements, an audit trail for program documentation to ensure control and tracking of enforcement documents, identification and verification of exemption-triggering changes in registration data, and regular audits of I/M inspection records, I/M program databases, and the Motor Vehicle Customer Service Division database.

Enforcement staff quality assurance I/M program auditors and tax clerks involved in vehicle registration are subject to regular performance audits by their supervisors. All

enforcement personnel (direct and indirect) involved in the motorist enforcement program are subject to disciplinary action, additional training, and termination for deviation from procedures. Specific provisions are outlined in the Motor Vehicle Customer Service Division procedures manual which is available upon request, the Salt Lake County I/M audit policy documents provided in Appendices for Section X, Part C, containing the Salt Lake County health regulations.

Co-operative enforcement oversight effort The Motor Vehicle Customer Service Division, Utah Division of Air Quality, Utah Highway Patrol and Salt Lake County I/M program staff meet at least once per month to ensure on-going high quality oversight of joint motorist compliance program. EPA audit of this process is authorized if measures to protect tax-payer confidentiality acceptable to Motor Vehicle Customer Service Division are exercised.

12. I/M Program quality assurance

Station/inspector audits Salt Lake County's I/M program regularly audits all certified I/M inspectors and stations to ensure compliance with Salt Lake County health regulations and policies. Particular attention is given to identifying and correcting any fraud or incompetence with respect to vehicle emissions inspections. Compliance with recordkeeping, document security, analyzer maintenance, and program security requirements are scrutinized. The inspector's skill level is also evaluated during audits. Another major purpose of the audits is to retrain inspectors, as necessary, as soon as problems are identified. Documentation sufficient to support a legal case to suspend or revoke a certification is also collected in the event of serious and/or repeated violations. Most stations and inspectors are audited every month and all at least quarterly.

Covert audits Salt Lake County, to the extent possible, performs a covert audit of each inspector and station at least once a year. The number of covert audits at least equals the number of certified inspectors. Covert audits are performed using a variety of vehicles that are representative of the subject fleet that are set to fail across a full range of malfunctions. Suspected problem stations and inspectors are targeted for earlier and more frequent audits. Complaints also trigger additional audits.

Covert performance audits shall include:

Remote visual observation of inspector performance, which may include the use of aids such as binoculars or video cameras, at least once per year per inspector in high-volume stations (i.e., those performing more than 4000 tests per year);

Site visits at least once per year per number of certified inspectors (per inspector FTE) using covert vehicles set to fail (this requirement sets a minimum level of activity not a requirement that each inspector be involved in a covert audit); and

For stations that conduct both testing and repairs, at least one covert vehicle visit per station per year including purchase of repairs and subsequent retesting if the vehicle is initially failed for tailpipe emissions.

Electronic audit capabilities The Salt Lake County I/M program equipment performs various analyses to identify statistically inconsistent data indicative of problem stations and inspectors. Overt audit records are maintained electronically in the analyzer. After overt audits, the auditor retrieves the data on the analyzer diskette containing the audit, vehicle inspection, and analyzer service, maintenance, and calibration records dating back to the previous audit. The data from each audit is added to the comprehensive central Salt Lake County I/M database. Further analysis of the central database results in identification of stations and inspectors for which additional audits are performed. It is anticipated that the UTAH98 Enhanced I/M program electronic audit capabilities will be substantially similar the UTAH91 program.

Auditor quality assurance Auditors receive 24 hours of formal classroom instruction and are provided on-the-job training in: the use of the UTAH91 analyzer; the Salt Lake County I/M health regulations, basic air pollution control; basic principles of emissions-related motor vehicle engine repair; emission control systems; evidence gathering; administrative procedures and laws; quality assurance practices; and covert audit procedures. Salt Lake County sends auditors to additional automotive emissions-related training and meetings on a regular basis. Auditor supervisors audit the I/M program auditors by reviewing their documentation and also auditing a number of their stations at least once every year. It is anticipated that the UTAH98 Enhanced I/M program auditor quality assurance process will be substantially similar the UTAH91 program.

Written audit procedures Copies of the Salt Lake County I/M program overt and covert audit procedures are provided in Section X, Part C, Appendices. A detailed description of the audit capabilities of the UTAH91 analyzer are found in Section 3.9 of the UTAH91 analyzer specifications. It is anticipated that the UTAH98 Enhanced I/M program written audit procedures and analyzer's automatic audit capabilities will be substantially similar the UTAH91 program.

13. Enforcement against stations and inspectors

General enforcement provisions The Salt Lake County I/M program is responsible for enforcement action against incompetent or dishonest stations and inspectors. The Salt Lake County health regulations include a penalty schedule. For serious or repeated offenses, auditors are authorized to immediately suspend the station or inspector by locking out their UTAH91 or UTAH98 analyzer(s). The county does not have legal authority to impose direct fines on stations or inspectors, but suspension or revocation of a station permit results in a substantial loss of income that is far in excess of $100 fine suggested by the EPA guidance. Fee settlements are at least as much the station's anticipated income for emissions testing for the time during which the station would be

suspended. A station permit may be suspended or revoked even if the owner/operator had no direct knowledge of the violation. In the case of incompetence, re-training is required before the permit is restored.

Salt Lake County revised its penalty schedules to comply with the more stringent specifications included in 40 CFR 51.364. The Utah Air Quality Board adopted the revised penalty schedules on January 30, 1995. The revised penalty schedule is found in the Section X, Part C, Appendices. At a minimum, inspector certification and station permit suspension shall be imposed for at least 6 months (or a fee retainage or settlement penalty equivalent to the inspector's salary for that period) whenever a vehicle is intentionally improperly passed for any portion of the required test.

Suspension and revocation Suspension or revocation effectively bars an individual from further inspections because the auditor removes the inspector's authorization code from the UTAH91 or UTAH98 analyzer. Evidence of indirect participation in emissions inspections by an individual while suspended or revoked would result in legal action against the station. If the station is suspended or revoked the analyzer is totally locked-out. The analyzers are initialized by an auditor for use at a single permitted station and only by inspectors certified for that station. A record of the serial numbers of all registered analyzers and their locations is maintained by Salt Lake County.

Enforcement records Salt Lake County keeps comprehensive records of all audit activities, warnings, suspensions, and revocations and report enforcement activity statistics to the EPA and the executive secretary on an annual basis.

14. Data collection

Analyzer inspection data The UTAH91 analyzer creates a detailed record of each emissions inspection performed including, but not limited to the following data, for each vehicle tested: test record number; inspection station number; inspector number; test system number; date of the test; emission test start time; the time final emission scores are determined; vehicle identification number (VIN); license plate number; test certificate number; gross vehicle weight rating (GVWR); model year, make, and type of vehicle; number of cylinders or engine displacement; transmission type; odometer reading; category of test performed (i.e., initial, first retest, or subsequent retest); fuel type of the vehicle; emission scores for HC, CO, and CO_2 at idle and 2500 RPM; and results (pass/fail/not applicable) for visual inspection of the catalytic convertor, air system, gas cap, evaporative system, positive crankcase (PCV) valve; and the fuel inlet restrictor. The tailpipe emission standards for each type of vehicle is included in a look-up table in the UTAH91 analyzer. The UTAH91 analyzer automatically uses the appropriate standards for the type of vehicle being tested and makes a pass/fail determination. The inspection data is recorded by the UTAH91 analyzer during the inspection procedure.

Analyzer quality assurance data Quality assurance data including a detailed history of all

calibration (including the concentration values of the calibration gases), service, lockout, and document security events are also recorded and maintained by the UTAH91 analyzer. Each UTAH91 record includes, as applicable, the station number, mechanic access number, auditor access number, service access number, analyzer serial number, date, and activity time.

UTAH91 analyzer database specifications The programming criteria for the analyzer database is described in Section 3 of the UTAH91 analyzer specifications. Appendix F of the UTAH91 analyzer specifications contains a complete description of the electronic data records. The data disk containing inspection and quality assurance information is removed from the UTAH91 analyzer by an auditor at least once a month during overt audits and maintained permanently in Salt Lake County's central I/M database.

UTAH98 analyzer data collection The UTAH98 Enhanced I/M analyzer data collection system will meet the requirements specified under 40 CFR 51.365 and be substantially similar to the UTAH91 data collection system. Detailed Salt Lake County UTAH98 database specifications will be developed in time to support the January 1, 1998, UTAH98 program implementation.

15. Data analysis and reporting

Annual Salt Lake County shall analyze I/M program data and submits annual reports to the U.S. Environmental Protection Agency and the executive secretary upon request. Beginning in July of 1995, Salt Lake County will submit to EPA and the executive secretary an annual report, for January through December of the previous year, which provides statistics on the testing, quality assurance, and enforcement activities of each I/M program. At a minimum the annual reports will include all of the data elements listed 40 CFR Subpart S 51.366.

Biennial Beginning in July of 1996, and biennially thereafter, Salt Lake County shall submit a report to EPA and the executive secretary discussing all changes made in the program design, funding, personnel levels, procedures, regulations, and legal authority. The report will also supply a detailed discussion of the impact of such changes upon the program, any weaknesses or problems discovered in the program over the previous two-year period, the steps that were taken to address those problems, the result of those corrective actions, and any future efforts planned.

16. Inspector training and certification

Inspector certification and initial training No person may conduct an official I/M inspection unless they are certified. Salt Lake County requires all persons desiring to become I/M technicians to pass a pretest to insure they have a basic understanding of automotive engine operation and repair. Only about one half of those attempting to become certified pass the pretest and are allowed to take the formal training class. Salt Lake County requires formal training prior to certifying inspectors. Each class includes at least the following information: the causes and effects of air pollution; the purpose, function, and goal of the I/M program; I/M health regulations, policies, and procedures; technical details of the test procedures and the rational for their design; emission control device function, configuration, and maintenance; quality control procedures and their purposes; public relations; and safety and health issues related to the I/M inspection process. Salt Lake County provides the training directly. Inspector candidates will not be issued a certificate unless they have passed a written test with at least 80% (or lower if an occupational analysis justifies it) correct responses and a hands-on test during which the trainee demonstrates the ability to properly conduct all test procedures, calibrate the analyzer, properly utilize equipment, and to follow other I/M program requirements. Salt Lake County will take appropriate steps to insure the security of the testing process.

Basic inspector certification renewal Inspector certification is valid for a period of one year, at which point refresher training and testing, are required prior to certification renewal. An auditor enters the inspector's certification expiration date in the analyzer(s) that the inspector is authorized to use. Starting 60 days prior to the inspector's certification expiration date the analyzer displays the message "Your mechanic permit expires MM/DD/YY". The analyzer locks-out inspectors that attempt to use the analyzer after their certification expires and displays the following message. "Your mechanic permit expired (date). You are not authorized to perform any emissions inspections at this time. Please contact your local I/M office." Auditors will not clear the lock-out until the inspector has renewed the certification. Salt Lake County may require evidence of more comprehensive emissions-related automotive training as a prerequisite to inspector certification renewal.

Inspector certification suspension and revocation A determination of inspector incompetence or failure to comply with I/M program requirements may result in suspension or revocation or an inspector's certification prior to the annual expiration date. A certification to conduct I/M inspections is not a legal right but rather a privilege bestowed by Salt Lake County conditional upon adherence to its I/M program requirements.

Inspector training authority and materials Authority to require mandatory I/M inspector training is established and described in the Salt Lake County health regulations. A description of the I/M inspector training programs and the written and hands-on tests is provided in Section X, Part C, Appendices.

17. Public information and consumer protection

General public information Salt Lake County, along with the Utah Department of Environmental Quality, provides a comprehensive public education and protection program including strategies to educate the public on: Utah's air quality problems; ways that people can reduce emissions; the requirements of state and federal law; the role of motor vehicles in the air quality problem; the need for and benefits of a vehicle emissions inspection program; ways to operate and maintain a vehicle in a low-emission condition; how to find a qualified repair technician; and the requirements of the I/M program. Information is provided via direct response to inquiries for information, reports, classes, pamphlets, fairs, school presentations, workshops, news releases, posters, signs, and public meetings.

Salt Lake County *I/M technical center* Salt Lake County operates an I/M technical center staffed with trained auditors and capable of performing emissions tests. A major function of the I/M technical center is to serve as a referee station to resolve conflicts between certified I/M inspectors, permitted stations, and motorists. Auditors actively protect consumers against fraud and abuse by inspectors, mechanics, and others involved in the I/M program. Complaints made on a confidential basis are investigated and resolved in a manner that conceals the person's identity to ensure protection of whistle blowers. Auditors advise motorists regarding emissions warranty provisions and assist the owners in obtaining warranty-covered repairs for eligible vehicles. Applications for waivers are evaluated by auditors at the I/M technical center and issued only after visual verification that all the requirements for a waiver have been met. The I/M technical center also provides motorists with information regarding the I/M program, general air pollution issues, and emissions-related automotive repairs.

Vehicle inspection report A vehicle inspection report (VIR) is printed and provided to the motorist after each vehicle inspection. The VIR includes a public awareness statement about automotive emissions and lists additional ways that the public can reduce air pollution. The test results are detailed on the VIR. Information about vehicle emissions warranties and the benefits of emissions-related repairs are printed for vehicles that failed the test. Information about waiver requirements and application procedures are printed on the VIR, if the vehicle has failed a retest, including the address and telephone number of the applicable I/M technical center. A complete description of the VIR is included in Appendix E of the UTAH91 analyzer specifications. It is anticipated that the UTAH98 Enhanced I/M VIR will be substantially similar to that used in the UTAH91 program.

Co-operative public education tools A variety of pamphlets and radio, television, and newspaper advertisements about automotive air pollution issues are developed and distributed by the Salt Lake County I/M program in cooperation with other I/M counties and the Utah Division of Air Quality. The legislature authorizes funding each year for pass-through money from the state to Salt Lake County for public education to help

reduce vehicle emissions.

18. Improving repair effectiveness

High priority Salt Lake County implemented a major Basic I/M program revision on September 1, 1991. Shortly thereafter, the Salt Lake County and the Utah Division of Air Quality staff jointly identified improvement of repair effectiveness as a high priority action item. The Governor's Clean Air Commission also recommended making affordable additional emissions-related training available. Full emission reductions will only be realized if the repair industry is able to competently diagnose and repair emissions-related defects.

Continuing education To that end, Salt Lake County's I/M staff has worked with Utah's higher education institutions to develop and provide emissions-related automotive technology classes to technicians. Inspectors are also encouraged to take classes offered by trade organizations, automobile manufacturers, and dealers. Salt Lake County subsidizes the tuition for certified I/M inspectors. The certification renewal tests are difficult enough to make this provision a good incentive. The classes are advertised in the county I/M technical bulletins. Appendices of Section X, Part C include descriptions of some of the classes available in the community.

I/M program repair support activities In initiating improved automotive educational opportunities, Salt Lake County works on a day-to-day basis to ensure that repair information is available. I/M stations are required to have available up-to-date relevant automotive diagnostic references and tools as a condition for obtaining a permit. Salt Lake County maintains a hot line to its I/M technical center that any mechanic can call for technical assistance related to vehicle inspection, diagnosis, and repair. Technical bulletins are regularly mailed to each certified inspector with information regarding training schedules, common problems found with particular engine families, and diagnostic tips.

19. Basic and Enhanced Basic I/M SIP implementation

As required by 40 CFR Part 51.373(a) the Basic I/M SIP requirements not included in the September 30, 1993, adoption of Section X by the Utah Air Quality Board have been funded and implemented, including but not limited to the covert audits requirements specified in Section X.C.12 and the penalty provisions specified in Section X.C.13. The Utah Air Quality Board adopted the changes included in Section X, Part C, Appendices on January 30, 1995.

The Basic I/M program health regulations, policies, procedures, and activities specified in this I/M SIP revision have been implemented. The Enhanced UTAH98 I/M program requirements will be implemented no later than January 1, 1998. Salt Lake County shall continue to implement and operate the I/M program until a maintenance plan, without an

I/M program, is approved by EPA in accordance with Section 175 of the Clean Air Act as amended.